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Regional Wood Use by Manufacturing Industries

CURRENT SERIAL RECORDS

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Use of lumber, plywood, and other wood materials in manufacturing varies widely among regions in the U.S. In 1960 industries in the Southern States consumed about one-third of both lumber and plywood, more than half the veneer, and substantial amounts of the hardboard and particleboard used by all manufacturing industries (table 1, fig. 1). Plants in the Central region used nearly as much lumber and plywood and a third or more of the hardboard and particleboard.

The proportion of wood materials consumed by establishments in the Northeast was from 12 to 27 percent in all forms. Plants in the

Pacific region used between 12 and 15 percent, and the Rocky Mountain region used only 2 percent or less of any wood material.

In all regions the furniture and fixture industries were among the largest users of all forms of wood. The millwork, prefabricated wood products, wooden container, and trailer coach industries also were important consumers in each region. Most of the large volumes reported by planing mills, veneer and plywood plants, and hardwood dimension establishments were utilized for manufacturing cut-to-size stock and fabricated parts sold to plants in other industries. For example, a high

TABLE 1.--Wood used in manufacturing industries, by region and form of wood, 1960

(Million units)

Region ¹	Lumber	Veneer	Plywood	Hardboard	Particleboard
	Bd. ft.	Sq. ft. (1-inch)	Sq. ft. (3/8-inch)	Sq. ft. (1/8-inch)	Sq. ft. (3/4-inch)
Total ²	11,742.9	426.0	2,811.2	1,218.1	140.8
Pacific.....	1,732.8	53.7	425.3	150.3	19.6
Rocky Mountain.....	207.2	1.8	57.4	17.7	2.7
Central.....	3,384.6	81.3	827.6	483.3	46.3
Northeast.....	2,683.7	50.8	581.8	333.4	33.2
South.....	3,726.3	238.4	919.1	278.4	39.0

¹ See figure 1.

² Total includes Major Group 19, Ordnance and accessories, for which regional data is not available.

WOOD USED IN MANUFACTURING INDUSTRIES BY REGIONS

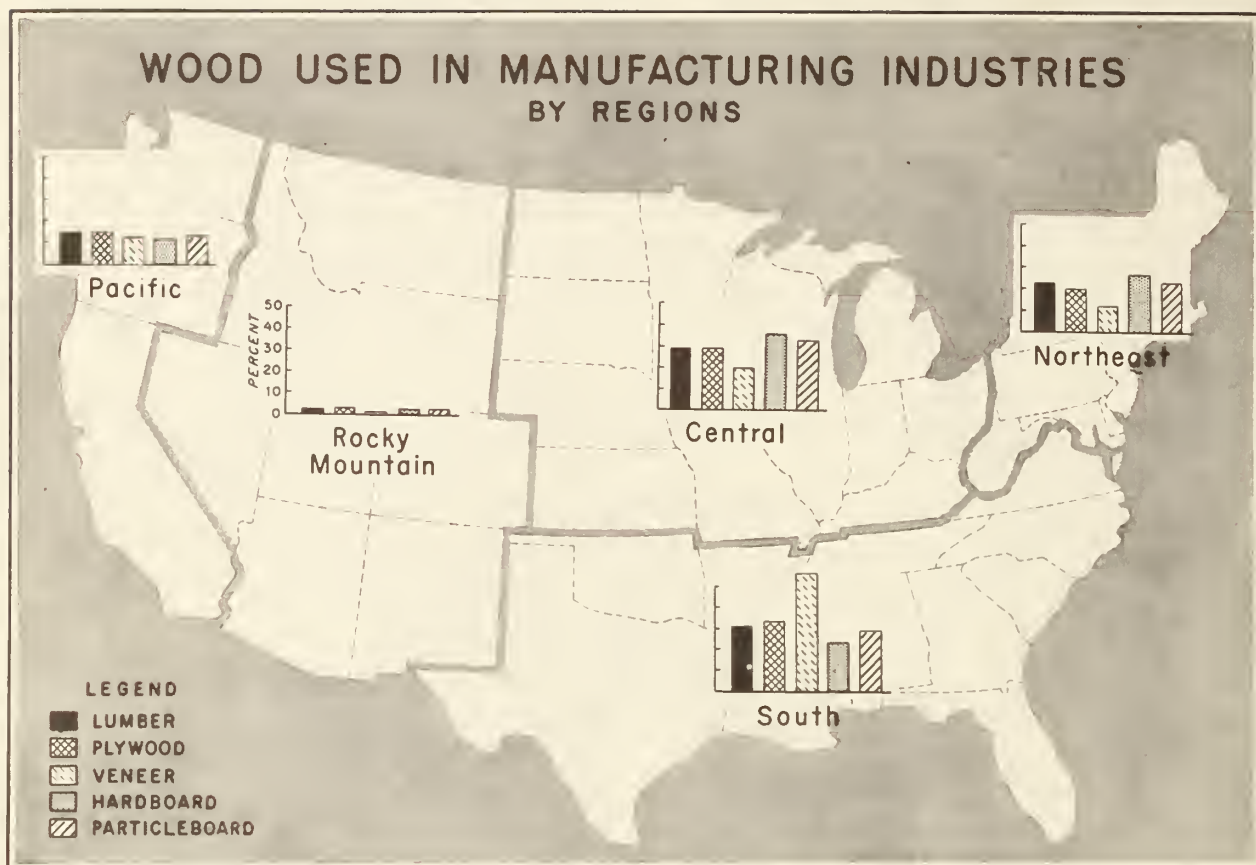


Figure 1.-Percent refers to the proportion of the total quantity of each form of wood used.

proportion of hardwood dimension output goes to the furniture industry. Most box shooks made in the plywood industry is assembled in other industries into boxes, baskets, and other products.

Of the lumber consumed in the South, one-fifth was used in the hardwood dimension and flooring industry, and one-fifth in the furniture and fixture industries. Two-thirds of the plywood used in the Southern States went to the wirebound box and crate, furniture and fixture, and prefabricated wood products industries. Over half of the veneer used by manufacturing plants was utilized in the South, principally for wirebound boxes and crates. Hardboard and particleboard in the Southern States were largely used in the furniture and fixture industries.

In the Central region lumber was chiefly used in the millwork and the furniture and fixture industries. More than 70 percent of the

plywood used in the Central States was divided equally among the prefabricated wood products, furniture and fixture, and trailer coach industries. Over 30 percent of the veneer consumed in this region went to the wirebound box and crate industries. Hardboard and particleboard were mainly utilized in the wallboard and the furniture and fixture industries.

The principal use of lumber in the Northeastern States was in the wood products "not elsewhere classified" and the furniture and fixture industries. These two industries bought about 37 percent of all the lumber used by manufacturers in the Northeast. Other large consumers were millwork plants and nailed wooden box and crate plants. Slightly less than half of the plywood used in this area was consumed in the furniture and fixture industries. The principal use of veneer in the Northeast was for containers. Many plants in this area were large users of hardboard for decorative wallboard.

Lumber and plywood in the Pacific and Rocky Mountain regions were primarily used in planing mills and millwork plants, and in the furniture and fixture industries.

These data supplement the information in USDA Statistical Bulletin 353, "Wood Used in Manufacturing Industries." The tables were prepared to meet numerous requests for regional information based on the 1960 survey results. For each form of wood (lumber, veneer, plywood, hardboard, and particle-board) the average establishment consumption was computed for each industry, and the employment size class in the U.S. Regional consumption was estimated by expanding the averages by the number of plants in each of the five regions.

Tables 2-6 show wood use by principal consuming industries arranged to the Standard Industrial Classification. Volume figures include the wood used in the manufacture of primary and secondary products in all establishments in that industry. Wood consumption by industry may differ from that for its primary product because an item may be a primary product of one industry and a secondary product of other industries.

The estimates include the wood used for pallets, containers, jigs, models made and used in the same industry, and dunnage. Not included are purchased wood items, such as cut-to-size stock fabricated parts, containers, and pallets. Wood utilized for these products is reported in the industries where they are made.

TABLE 2.--Lumber used in manufacturing industries, by region, 1960

(Million board feet)

Industry number ¹	Industry	Total	Region ²				
			Pacific	Rocky Mountain	Central	North-east	South
	Total, all industries ³	11,742.9	1,732.8	207.2	3,384.6	2,683.7	3,726.3
19	Ordinance and accessories.....	8.3	(4)	(4)	(4)	(4)	(4)
20-23	Tobacco, food, textiles, and apparel.....	72.1	7.2	1.5	19.9	21.4	22.1
24	Lumber and wood products.....	6,909.6	1,205.5	144.5	1,729.9	1,342.4	2,487.3
2421	Sawmills and planing mills...	870.4	322.9	45.4	56.7	60.4	385.0
2426	Hardwood dimension and flooring.....	1,144.1	9.5	(5)	226.4	130.2	778.0
2429	Special product sawmills.....	38.9	14.3	(5)	4.7	3.2	16.7
2431	Millwork plants.....	1,556.9	334.5	61.2	543.2	266.5	351.5
2432	Veneer and plywood plants....	130.0	70.9	.7	14.5	6.9	37.0
2433	Prefabricated wood products..	824.3	115.1	16.6	331.0	146.5	215.1
2441	Nailed wood boxes and shooks..	917.6	188.9	14.2	198.8	232.4	283.3
2442	Wirebound boxes and crates....	232.5	9.8	(5)	38.8	22.1	161.8
2443	Veneer and plywood containers	20.0	.5	(5)	3.3	3.2	13.0
2445	Cooperage.....	12.8	.8	(5)	5.1	4.7	2.2
2499	Wood products, n.e.c.....	1,162.1	138.3	6.4	307.4	466.3	243.7
25	Furniture and fixtures.....	1,960.6	200.1	16.8	502.0	435.9	805.8
2511	Wood household furniture (except upholstered).....	1,134.8	102.5	4.5	268.1	205.9	553.8
2512	Wood household furniture, upholstered.....	425.2	52.9	5.1	104.0	106.3	156.9
2515	Mattresses and bedsprings....	84.9	10.7	2.0	23.0	24.3	24.9
2521	Wood office furniture.....	44.7	.9	(5)	23.1	11.6	9.1
2531	Public building furniture....	57.9	9.1	1.3	20.0	9.7	17.8
254 & 2591	Partitions and fixtures; venetian blinds and shades.	107.8	11.7	1.7	37.3	43.5	13.6
25--	Other furniture and fixtures.	105.3	12.3	2.2	26.5	34.6	29.7
26	Paper and related products.....	185.5	17.6	.6	57.1	69.6	40.6
2621 & 2631	Paper mills (except building and paper board mills).....	116.8	10.3	.6	33.5	44.1	28.3
26--	Other paper and related products.....	68.7	7.3	(5)	23.6	25.5	12.3
27-30	Printing and publishing; chemicals; petroleum and coal; and rubber and miscellaneous plastic products.....	76.1	6.9	1.7	24.7	28.3	14.5
31	Leather and leather products...	30.4	.5	2.3	5.3	20.7	1.6
3131	Footwear cut stock.....	16.6	.2	(5)	3.4	12.2	.8
3161	Luggage.....	10.0	.2	2.3	1.2	5.7	.6
31--	Other leather products.....	3.8	.1	(5)	.7	2.8	.2
32	Stone, clay, and glass products	348.8	96.3	6.8	94.2	84.8	66.7
3211	Flat glass.....	152.9	76.6	(5)	26.4	28.9	21.0
32--	Other stone, clay, and glass products.....	195.9	19.7	6.8	67.8	55.9	45.7

See footnotes at end of table.

TABLE 2.--Lumber used in manufacturing industries, by region, 1960--Continued

(Million board feet)

Industry number ¹	Industry	Total	Region ²				
			Pacific	Rocky Mountain	Central	North-east	South
33	Primary metal products.....	378.3	24.6	11.5	151.2	158.5	32.5
331	Blast furnaces, steel works, and rolling and finishing mills.....	197.9	11.3	2.2	74.7	94.4	15.3
335	Nonferrous rolling and drawing products.....	130.3	9.7	7.4	53.5	50.4	9.3
33--	Other primary metal products.	50.1	3.6	1.9	23.0	13.7	7.9
34	Fabricated metal products.....	279.8	29.9	3.4	119.8	94.2	32.5
35	Machinery, except electrical...	473.0	30.9	4.2	228.1	158.3	51.5
352	Farm machinery and equipment.	35.6	2.6	.6	25.0	3.3	4.1
353	Construction and like equipment.....	78.2	6.0	1.9	42.7	13.4	14.2
354	Metal working machinery.....	39.6	1.1	(s)	23.0	15.0	.5
355	Special industry machinery...	76.1	3.8	(s)	23.0	38.8	10.5
356	General industrial machinery and equipment.....	74.5	6.5	.5	36.3	27.0	4.2
3585	Refrigeration machinery.....	120.5	6.5	.7	54.8	43.1	15.4
35--	Other machinery (except electrical).....	48.5	4.4	.5	23.3	17.7	2.6
36	Electrical machinery, equipment and supplies.....	126.6	8.4	.7	61.5	40.5	15.5
37	Transportation equipment.....	517.2	78.0	9.8	241.3	83.8	104.3
3713	Truck and bus bodies.....	30.5	4.6	.5	11.5	8.0	5.9
3715	Truck trailers.....	19.0	3.1	.5	7.2	2.9	5.3
3717	Motor vehicles and parts.....	61.5	3.8	(s)	44.9	9.7	3.1
372	Aircraft and parts.....	32.6	8.9	.5	8.7	9.5	5.0
373	Ship- and boatbuilding and repair.....	74.7	12.5	(s)	11.3	24.7	26.2
374	Railroad equipment.....	49.0	(s)	(s)	25.1	21.3	2.6
3791	Trailer coaches.....	236.1	41.8	8.3	126.3	5.6	54.1
37--	Other transportation equipment.....	13.8	3.3	(s)	6.3	2.1	2.1
38	Instruments and related products.....	40.0	4.3	.5	11.9	20.3	3.0
39	Miscellaneous manufacturing industries.....	336.6	22.6	2.9	137.7	125.0	48.4
3931	Musical instruments and parts	51.4	2.0	(s)	29.8	15.5	4.1
394	Toys and sporting goods.....	140.3	9.5	1.6	52.6	59.3	17.3
395	Office supplies.....	10.4	(s)	(s)	3.3	4.8	2.3
3981	Brooms and brushes.....	8.7	(s)	(s)	2.4	5.7	.6
3988	Morticians goods.....	81.5	6.3	.5	32.4	23.1	19.2
3993	Signs and advertising displays.....	35.8	4.0	(s)	15.3	7.3	4.4
39--	Other miscellaneous manufactures.....	8.5	.8	(s)	1.9	5.3	.5

¹ Two-digit numbers identify Major Groups of the Standard Industrial Classification (SIC); three-digit numbers are industry subgroups of the Major Groups; four-digit numbers identify individual SIC industries. Two-digit numbers followed by two dashes (e.g., 33--) indicate that four-digit industries in an industry group have been combined.

² See figure 1.

³ Major Group 19 is not included in regional volume totals.

⁴ Not available.

⁵ Less than 50,000 units.

TABLE 3.--Plywood used in manufacturing industries, by region, 1960

(Million square feet, 3/8-inch basis)

Industry number ¹	Industry	Total	Region ²				
			Pacific	Rocky Mountain	Central	North-east	South-ern
	Total, all industries ³	2,819.8	425.3	57.4	827.6	581.8	919.1
19	Ordnance and accessories.....	8.6	(4)	(4)	(4)	(4)	(4)
20-23	Tobacco, food, textiles, and apparel.....	26.6	1.1	.1	5.0	10.9	9.5
24	Lumber and wood products.....	1,351.6	215.0	31.2	333.7	201.3	570.4
2426	Hardwood dimension and flooring.....	28.1	.3	(s)	5.9	2.3	19.6
2431	Millwork plants.....	307.5	70.4	13.3	84.7	63.9	75.2
2432	Veneer and plywood plants....	109.2	59.9	.7	9.8	6.7	32.1
2433	Prefabricated wood products..	540.3	65.8	16.3	217.8	81.6	158.8
2441	Nailed wood boxes and shooks..	55.2	13.0	.4	6.2	9.0	26.6
2442	Wirebound boxes and crates...	273.2	.1	(s)	.7	24.6	247.8
2499	Wood products, n.e.c.....	29.3	3.6	.2	7.6	12.3	5.6
24--	Other wood products.....	8.8	1.9	.3	1.0	.9	4.7
25	Furniture and fixtures.....	775.8	107.2	11.2	208.1	228.3	221.0
2511	Wood household furniture (except upholstered).....	450.4	59.6	4.2	112.8	115.0	158.8
2512	Wood household furniture, upholstered.....	10.8	1.5	.2	2.5	2.7	3.9
2514	Metal household furniture....	51.0	5.5	(s)	18.9	18.7	7.9
2531	Public building furniture....	31.3	5.6	1.0	9.6	6.0	9.1
254 & 2591	Partitions and fixtures; venetian blinds and shades.	183.5	28.2	5.2	51.6	68.1	30.4
25--	Other furniture and fixtures.	48.8	6.8	.6	12.7	17.8	10.9
26-30	Paper and related products; printing and publishing; chemicals; petroleum and coal products; and rubber and miscellaneous plastics products.....	27.6	3.6	.3	9.0	12.1	2.6
31	Leather and leather products...	41.8	1.3	.4	7.9	28.6	3.6
3161	Luggage.....	21.7	1.0	.4	4.7	13.6	2.0
31--	Other leather and leather products.....	20.1	.3	(s)	3.2	15.0	1.6
32	Stone, clay, and glass products.	30.9	12.5	.2	6.2	7.2	4.8
3211	Flat glass.....	23.0	11.5	(s)	4.0	4.1	3.4
32--	Other stone, clay, and glass products.....	7.9	1.0	.2	2.2	3.1	1.4
33	Primary metal products.....	10.0	.9	.4	4.7	3.2	.8
34	Fabricated metal products.....	19.4	2.6	.3	7.9	6.4	2.2
35	Machinery, except electrical...	25.0	2.5	.3	11.5	7.3	3.4

See footnotes at end of table.

TABLE 3.--Plywood used in manufacturing industries, by region, 1960--Continued

(Million square feet, 3/8-inch basis)

Industry number ¹	Industry	Total	Region ²				
			Pacific	Rocky Mountain	Central	North-east	South-ern
36	Electrical machinery, equipment, and supplies.....	13.7	1.2	.1	5.6	5.7	1.1
37	Transportation equipment.....	428.8	70.4	11.4	208.0	46.9	92.1
3713	Truck and bus bodies.....	25.3	3.2	.2	11.2	5.9	4.8
373	Ship- and boatbuilding and repair.....	41.7	6.2	.2	10.8	11.5	13.0
374	Railroad equipment.....	31.9	(5)	(5)	15.1	14.7	2.1
3791	Trailer coaches.....	290.9	52.7	10.6	156.0	7.2	64.4
37--	Other transportation equipment.....	39.0	8.3	.4	14.9	7.6	7.8
38	Instruments and related products.....	11.3	1.6	.1	3.3	5.4	.9
39	Miscellaneous manufactures.....	48.7	5.4	1.4	16.7	18.5	6.7
394	Toys and sporting goods.....	10.2	1.0	.2	3.7	4.2	1.1
3993	Signs and advertising displays.....	27.5	3.6	1.1	9.2	9.2	4.4
39--	Other miscellaneous manufactures.....	11.0	.8	.1	3.8	5.1	1.2

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² See figure 1.

³ Major Group 19 is not included in regional volume totals.

⁴ Not available.

⁵ Less than 50,000 units.

TABLE 4.--Veneer used in manufacturing industries, by region, 1960

(Million square feet, 1-inch basis)

Industry number ¹	Industry	Total	Region ²				
			Pacific	Rocky Mountain	Central	North-east	South-ern
	Total, all industries ³	426.0	53.7	1.8	81.3	50.8	238.4
24	Lumber and wood products.....	354.6	47.3	1.4	57.5	36.1	212.3
2431	Millwork plants.....	11.9	2.1	.5	6.2	1.1	2.0
2432	Veneer and plywood plants....	90.2	28.5	.8	12.6	6.3	42.0
2441	Nailed wood boxes and shook..	38.8	8.6	.1	5.5	5.3	19.3
2442	Wirebound boxes and crates...	148.8	6.1	(4)	24.5	13.2	105.0
2443	Veneer and plywood containers	54.1	.8	(4)	5.7	6.8	40.8
24--	Other wood products.....	10.8	1.2	(4)	3.0	3.4	3.2
25	Furniture and fixtures.....	42.0	3.5	.2	9.6	5.1	23.6
2511	Wood household furniture (ex- cept upholstered).....	33.5	2.1	(4)	6.6	3.6	21.2
2521	Wood office furniture.....	2.1	--	(4)	1.1	.5	.5
2531	Public building furniture....	4.2	1.0	.2	1.1	.6	1.3
25--	Other furniture and fixtures.	2.2	.4	(4)	.8	.4	.6
39	Miscellaneous manufactures.....	17.3	1.2	(4)	9.9	5.3	.9
3983	Matches.....	13.6	1.0	(4)	8.2	3.9	.5
39--	Other miscellaneous manu- factures.....	3.7	.2	(4)	1.7	1.4	.4
	All other industries.....	12.1	1.7	.2	4.3	4.3	1.6

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² See figure 1.

³ Major Group 19 is not included in regional volume totals.

⁴ Less than 50,000 units.

TABLE 5.--Hardboard used in manufacturing industries, by region, 1960

(Million square feet, 1/8-inch basis)

Industry number ¹	Industry	Total	Region ²				
			Pacific	Rocky Mountain	Central	North-east	South
	Total, all industries ³	1,218.1	150.3	17.7	438.3	333.4	278.4
24	Lumber and wood products.....	203.3	29.5	4.5	73.1	37.2	59.0
2426	Hardwood dimension and flooring.....	11.8	.8	(4)	2.2	3.3	5.5
2431	Millwork plants.....	68.2	14.7	2.6	22.6	12.0	16.3
2433	Prefabricated wood products..	82.8	7.2	1.6	38.0	7.5	28.5
2499	Wood products, n.e.c.....	33.4	4.7	.2	8.9	13.1	6.5
24--	Other wood products.....	7.1	2.1	.1	1.4	1.3	2.2
25	Furniture and fixtures.....	327.4	37.0	2.7	98.7	85.4	103.6
2511	Wood household furniture (except upholstered).....	196.0	19.8	.9	48.8	42.0	84.5
2514	Metal household furniture....	45.0	5.3	(4)	22.0	14.9	2.8
2531	Public building furniture....	11.3	2.0	.2	3.9	1.7	3.5
254 & 2591	Partitions and fixtures; venetian blinds and shades.	59.3	8.1	1.5	18.8	22.1	8.8
25--	Other furniture and fixtures.	15.8	1.8	.1	5.2	4.7	4.0
26	Paper and related products.....	216.2	22.0	1.8	67.7	95.4	29.3
30	Rubber and miscellaneous plastic products.....	81.1	7.9	.3	31.8	34.8	6.3
32	Stone, clay, and glass products	63.3	5.6	.7	25.2	18.5	13.3
36	Electrical machinery, equipment and supplies.....	44.9	9.0	.7	11.9	19.6	3.7
37	Transportation equipment.....	195.3	30.9	5.6	99.6	5.4	53.8
3717	Motor vehicles and parts.....	3.5	.2	(4)	2.5	.6	.2
373	Ship- and boatbuilding and repair.....	2.6	.1	(4)	1.1	.6	.8
3791	Trailer coaches.....	185.4	29.5	5.6	94.5	3.5	52.3
37--	Other transportation equipment.....	3.8	1.1	(4)	1.5	.7	.5
39	Miscellaneous manufactures.....	44.7	3.9	.8	15.0	20.4	4.6
394	Toys and sporting goods.....	24.4	1.4	(4)	8.3	13.1	1.6
3933	Signs and advertising displays.....	17.3	2.2	.7	6.0	5.8	2.6
38--	Other miscellaneous manufactures.....	3.0	.3	.1	.7	1.5	.4
	All other industries.....	41.9	4.5	.6	15.3	16.7	4.8

¹ Two-digit numbers identify Major Groups of the Standard Industrial Classification (SIC); three-digit numbers are industry subgroups of the Major Groups; four-digit numbers identify individual SIC industries. Two-digit numbers followed by two dashes (e.g., 33--) indicate that four-digit industries in an industry group have been combined.

² See figure 1.

³ Major Group 19 is not included in regional volume totals.

⁴ Less than 50,000 units.

TABLE 6.--Particleboard used in manufacturing industries, by region, 1960

(Million square feet, 3/4-inch basis)

Industry number ¹	Industry	Total	Region ²				
			Pacific	Rocky Mountain	Central	North-east	South-ern
	Total, all industries ³	140.8	19.6	2.7	46.3	33.2	39.0
24	Lumber and wood products.....	34.2	6.7	1.3	12.7	5.3	8.2
2431	Millwork plants.....	9.5	1.7	.4	3.8	1.5	2.1
2432	Veneer and plywood plants....	2.2	1.3	(4)	.2	.1	.6
2433	Prefabricated wood products..	20.8	3.3	.9	8.3	3.4	4.9
24--	Other wood products.....	1.7	.4	(4)	.4	.3	.6
25	Furniture and fixtures.....	88.6	9.7	1.0	26.4	23.4	28.1
2511	Wood household furniture (except upholstered).....	34.9	3.2	.2	7.5	5.8	18.2
2512	Wood household furniture, upholstered.....	1.8	(4)	(4)	.9	.2	.7
2514	Metal household furniture....	17.9	1.2	(4)	7.3	6.7	2.7
2521	Wood office furniture.....	1.6	.1	(4)	.9	.4	.2
2531	Public building furniture....	6.8	1.1	.1	2.3	1.1	2.2
254	Partitions and fixtures.....	22.3	3.4	.6	6.5	8.2	3.6
25--	Other furniture and fixtures.	3.3	.7	.1	1.0	1.0	.5
37	Transportation equipment.....	8.1	2.1	.3	3.6	.3	1.8
3791	Trailer coaches.....	7.8	2.0	.3	3.5	.2	1.8
37--	Other transportation equipment.....	.3	.1	(4)	.1	.1	(4)
	All other industries.....	9.9	1.1	.1	3.6	4.2	.9

¹ Two-digit numbers identify Major Groups of the Standard Industrial Classification (SIC); three-digit numbers are industry subgroups of the Major Groups; four-digit numbers identify individual SIC industries. Two-digit numbers followed by two dashes (e.g., 33--) indicate that four-digit industries in an industry group have been combined.

² See figure 1.

³ Major Group 19 is not included in regional volume totals.

⁴ Less than 50,000 units.

